

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512



January 24, 2002

Mike Argentine
Manager, Project Development
Calpine
Western Region Office
4160 Dublin Blvd.
Dublin, CA 94568

Dear Mr. Argentine:

CENTRAL VALLEY ENERGY CENTER (01-AFC-22) STAFF DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures, if necessary.

These data requests (#1-145) address the areas of air quality, alternatives, biological resources, cultural resources, geology, land use, socioeconomics, soil and water resources, traffic and transportation, transmission system engineering, and visual resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before February 24, 2001, or on such date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to both Commissioner Arthur Rosenfeld, Presiding Member of the Committee for the Central Valley Energy Center proceeding, and to me, within 10 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (f)). If you have any questions regarding the enclosed data requests, please call me at (916) 654-4067.

Sincerely,

Matt Trask
Energy Facility Siting Project Manager

Enclosure

**Central Valley Energy Center
(01-AFC-22)
Data Requests**

Technical Area: Air Quality

Author: William Walters, Lisa Blewitt and Keith Golden

BACKGROUND

At the time the AFC was completed, the final turbine selection had not been determined. The environmental analysis presented was based on three Siemens-Westinghouse 501FD combustion turbines. Staff needs additional information to be assured that the project is being evaluated as currently proposed.

DATA REQUEST

1. Please identify any changes necessary to the air quality analysis based on the selected turbine model, if it is not the Siemens-Westinghouse 501FD. This should include any necessary revisions to the operating, startup and commissioning emission totals and revisions to the modeling results as necessary to reflect the turbine selection and any other changes to the project that may have occurred since the AFC was filed.
2. Please list any other revisions to the project that would affect air quality emission or modeling results that have occurred since the AFC and AFC Supplement were filed. Please also list revisions to assumptions that affect the analysis of the project.

BACKGROUND

The air dispersion input/output modeling files provided electronically with the AFC are incomplete. Staff needs all relevant input/output files, and a description of the files used in the modeling analyses, in order to complete the assessment of the modeling analyses conducted by the Applicant.

DATA REQUEST

3. Please provide an electronic copy of a complete set of the modeling input/output files. Staff's review indicates that the construction modeling output files and the 1-hour NO₂, NO_x-OLM construction modeling input/output files were not included in the CD that was provided to the CEC in October with the AFC. Staff's review of the modeling files is not complete, so we would encourage the Applicant to review the October CD and determine if additional modeling files, other than those listed above, should be provided in the data response.
4. Please provide a short tabular description of all of the modeling input files.

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BACKGROUND

In the AFC (Appendix 8.1D), the temporary PM₁₀ impacts from construction appear to be potentially significant. Additionally, there appears to be errors in the reporting of construction emissions.

DATA REQUEST

5. Please provide the daily and hourly construction schedules. Also identify the anticipated construction schedule for the on-site and linear facilities, identifying overlaps in the monthly construction schedule.
6. Please remodel on-site construction emissions using appropriate hour of day emission factors, if necessary, based on the heavy equipment operating schedule and any corrected emission calculations.
7. In Table 8.1D-1 (AFC Appendix 8.1D, pg. 8.1D-3), the emissions of SO_x from offsite worker travel and truck/rail deliveries appears to be incorrect (Is 1/7 equal to 1.7?). Please provide an updated table.
8. Please provide electronic copies of any new or revised construction modeling input/output files.

BACKGROUND

Maximum emission rates expected during startup or shutdown are provided for NO_x, CO, and VOC for the turbines. PM₁₀ and SO₂ emissions are not included in Table 8.1-20 (AFC page 8.1-26) because emissions of these pollutants will be lower during startup than during base load facility operations. Staff needs additional information and clarification to complete the review of the air quality impact analysis.

DATA REQUEST

9. Please identify if multiple turbines will undergo cold, warm or hot startup simultaneously.
10. Please identify whether emissions may also be elevated during “warm” or “hot” startups, and if so provide estimates of the warm or hot start emissions.
11. Please identify if the combined duration of cold, warm and hot starts may be greater than 416 hours per year per turbine (AFC pg. 8.1-27).

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BACKGROUND

The maximum facility impacts calculated from each of the modeling analyses are summarized in Table 8.1-26 (AFC pg. 8.1-38). The results are provided in Appendix 8.1B. Staff requires additional information to support the ISCST3 results presented.

DATA REQUEST

12. The ISCST3 modeling impact results by pollutant and averaging period ($\mu\text{g}/\text{m}^3$) are provided in Table 8.1-26, however the results presented cannot be matched with the results provided in Table 8.1B-3 (AFC Appendix 8.1B, pg. 8.1B-4). Specifically:
 - a) Maximum impacts appear to be based on an emission ratio using 3.0 g/s as the basis, not 4.0 g/s as shown in the lower table. Please confirm the basis.
 - b) Staff believes the turbine emission rates (g/s) provided in the top table have been multiplied by three (i.e. three turbines) to get the modeled impacts shown in the middle table. Please confirm.

BACKGROUND

The Applicant has indicated that the project meets all Best Available Control Technology Requirements; however, recent BACT determinations by USEPA, including the Morro Bay Project, suggests that for 7F frame turbine combined-cycle plants, USEPA considers BACT for NO_x to be 2.0 ppm (@15% O_2 1-hour rolling average) and BACT for CO to be 2.0 ppm (@15% O_2 3-hour rolling average). The Applicant (AFC Appendix 8.1E, pg. 8.1E-1) is currently proposing a NO_x emission limit of **2.5 ppm** (@15% O_2 1-hour rolling average), 2.0 ppm (@15% O_2 annual average), and a CO emission limit of **6.0 ppm** (@15% O_2 3-hour rolling average). CARB Guidelines for Power Plants (AFC Appendix 8.1E, pg. 8.1E-5) suggest an ammonia emissions limit of 5 ppm (@ 15% O_2 , 3-hour average), which has been agreed to by other recent combined cycle projects. The Applicant is proposing an ammonia slip concentration of **10 ppm** (@ 15% O_2 1-hour average). Staff needs additional information to identify whether the project will meet BACT for NO_x , CO and ammonia.

DATA REQUEST

13. Please identify if the project will be able to meet USEPA's anticipated BACT determination for NO_x and CO emissions. Please identify if any additional control measures will be necessary to meet NO_x and CO emission limits of 2.0 ppm (@15% O_2 1-hour rolling average) and 2.0 ppm (@15% O_2 3-hour rolling

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average), respectively; and please provide the associated costs of any such control measures.

14. Please explain why this project, as opposed to other proposed and certified projects, cannot meet an ammonia slip level of 5 ppm (@15% O₂). Also please identify measures, including increasing catalyst surface area, which might allow the project to meet the BACT guideline level for ammonia, and identify the associated costs of such measures.

BACKGROUND

Emissions offsets for the Central Valley Energy Center (CVEC) project are required for VOC, NO_x and PM₁₀ (AFC Table 8.1-37, pg. 8.1-52) based on District regulations. Additional information regarding emissions offsets are provided in a letter to the District dated November 20, 2001 (AFC Supplemental Attachment 12-AQ-9). Staff needs additional information regarding the ERCs secured for this project.

DATA REQUEST

15. Please provide copies of the District certificates, and purchase agreements or option contracts for certificates not currently in the Applicant's name, for all project ERC sources.
16. Please confirm through communication with the District and USEPA that the ERCs proposed for this project have passed the USEPA Reasonably Available Control Technology (RACT) adjustment test. Please provide written confirmation from USEPA to verify the findings presented in the response to this request.

BACKGROUND

As part of the Data Adequacy response the Applicant provided a letter dated January 8, 2002, that seems to indicate that, if necessary, the project's SO₂ emissions could be offset by considering the SO₂ ERCs that are being used to offset a portion of the project's PM₁₀ emissions. While staff is still reviewing the applicability of this methodology, our calculations were not able to duplicate the numerical findings provided in the Applicant's letter. We require additional information to fully understand the Applicant's calculation approach and offset proposal intentions as stated in this letter and as given in the other Data Adequacy responses.

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DATA REQUEST

17. Please provide detailed calculations of the PM₁₀ and SO₂ emission reduction credits being used to offset the project's PM₁₀ emissions assuming that the current USEPA offset sanction remains in force, and please provide a separate calculation assuming that the offset sanction has been lifted.
18. Please confirm or refute staff's belief that the Applicant's current offset proposal is strictly limited to using the quantity of ERCs that would be necessary meet the SJVAPCD offset requirements.
19. Please confirm or refute staff's belief that the Applicant's PM₁₀ offset proposal, if the offset sanction were lifted, would be revised by reducing the amount of interpollutant offsets currently proposed, and not revised by reducing the amount of direct PM₁₀ ERCs currently being proposed.

BACKGROUND

A description of the Central Valley Energy Center (CVEC) project's planned initial commissioning phase is provided in Data Adequacy Response 6-AQ-4. Staff requires additional information regarding initial commissioning.

DATA REQUEST

20. Please confirm the total duration of initial commissioning and the basis (e.g. approximately seven weeks duration with each CTG/HRSG train being commissioned one at a time).
21. The Gas Turbine/HRSG commissioning profile provided in Attachment 6-AQ-4 (of the Data Adequacy response), allows 264 hours for full load, full SCR testing for CTG/HRSG 1, but only 24 hours for CTG/HRSG 2 and CTG/HRSG 3. Please explain this basis.
22. Please provide a complete table of commissioning modeling results and the associated analysis based on the information provided in Attachment 6-AQ-4. The modeling analysis performed should incorporate maximum emissions for all averaging times for each criteria pollutant modeled. Data should support the information presented in section 8.1.5.1.2, "Impacts During Turbine Commissioning" (page 8.1-39).
23. Please provide the assumed exhaust parameters for each of the operating modes provided in the table in Attachment 6-AQ-4.

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24. Please provide the calculation basis for each of the operating modes provided in Attachment 6-AQ-4, including number of startups, startup duration, startup type (cold, warm, hot), average turbine load, etc.

BACKGROUND

In order for the District to issue CVEC a permit to construct, the Applicant must demonstrate that all of their facilities within the state of California are in compliance with their respective permits and all air quality regulations.

DATA REQUEST

25. Please provide a listing of the operating facilities with air quality permits owned by the Applicant or its affiliates in the state of California. Identify the location of each facility, the local permitting district, whether the facility has a PSD permit issued separately from USEPA and list the compliance status of each facility.

BACKGROUND

In order to assess the continuing air quality permitting issues under the accelerated timeframe for the assessment of this project, staff requires timely copies of all written communication between the Applicant, District and USEPA.

DATA REQUEST

26. Please provide all written project correspondence (including e-mails) that has occurred to date between the District or USEPA and the Applicant, and as it occurs between the District or USEPA and Applicant until the final commission decision for this case. Please include copies of all permit applications submitted to the District and USEPA.

BACKGROUND

The auxiliary boiler maximum annual emissions are based on 3,000 hours per year of operation (AFC pg. 8.1-27).

DATA REQUEST

27. Please identify why the auxiliary boiler will be required to operate as many as 3,000 hours per year.

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BACKGROUND

The air dispersion modeling analysis shows that the project's PM₁₀ impacts would add to a background air quality condition that is already severe, with violations of the state and federal 24-hour PM₁₀ ambient air quality standards. Those impacts also indicate that under certain meteorological conditions, PM₁₀ impacts would occur at the town of San Joaquin. The PM₁₀ mitigation proposal is a combination of PM₁₀ and SO₂ emission reduction credits (ERCs) located within the boundaries of the San Joaquin Valley Air District, but none are near the potential PM₁₀ impact areas. Staff is concerned that a disproportionate PM₁₀ impact can occur on the community of San Joaquin and that the mitigation proposed may not adequately mitigate this impact.

DATA REQUEST

28. Please describe how the ERCs proposed for this project adequately mitigate the PM₁₀ and associated health impacts to the residents of the town of San Joaquin. There needs to be clear connection or nexus between the project's PM₁₀ impacts and the use of ERCs as mitigation and how the use of such ERCs adequately mitigate a localized impact. Please also provide information on the ability to obtain mitigation in the local area, such as by retrofitting school busses, agricultural machinery, or internal combustion engined water pumps, or by controlling local stationary sources.

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Technical Area: Alternatives

Author: Susan Lee, Rebecca Morgenstern

BACKGROUND

In the AFC, the Applicant presents five sites considered as alternatives to the CVEC. Staff needs more information on those alternative sites in order to comply with CEQA's requirement for alternatives analysis. Although the AFC provides a summary table (Table 9.2-2) of the impacts that would result from locating the CVEC at the alternative site locations, the specific alternative site locations are not clear and additional information is needed. A map is included in the AFC (Figure 9.2-1), but the county lines are incorrect (Madera County does not border San Joaquin County) and the proposed project location and the specific location of the alternative sites are not identified.

DATA REQUEST

29. Section 9.2 – Describes the locations of the five alternative sites presented in Section 9 of the AFC. Please state the exact location of the five alternative sites presented in the AFC including the address or cross streets. Also, include the size of the parcel (in acres), zoning designation, current use, and any specified uses (such as Williamson Act) of the parcel.
30. Please provide a detailed map (preferably on a topographic base) for the five alternative sites presented in the AFC and showing the proposed site location. The map should identify the exact location of each parcel, with the parcel size and shape illustrated on the map. Also, for each site, show the routes for the transmission line, water supply line and the natural gas pipeline. In addition, please include county lines, major waterways, transmission lines, railroads and major roadways.
31. For each alternative site, state the lengths (in feet or tenths of miles) for the transmission line, water supply line and the natural gas pipeline.
32. For each alternative site, state the distance (in feet or tenths of miles) to the nearest residences or sensitive receptors (for example hospitals or schools), and the location of those receptors.
33. For each alternative site, please provide a narrative description about the impacts for each resource described in Table 9.2-2. For example, why would the impacts to biological resources at the Panoche Alternative Site be greater than the proposed project?

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Technical Area: Biological Resources

Author: Tom Scofield

BACKGROUND

The applicant has provided an outline for a Biological Resource Mitigation Implementation and Monitoring Plan (BRMIMP) that describes how the biological resource mitigation measures would be implemented (Appendix 8.2D, Volume II of the AFC). To determine if the proposed mitigation is suitable to reduce or minimize impacts to biological resources, staff needs to evaluate the specific mitigation measures that will be implemented prior to, during, and following construction activities at the CVEC.

DATA REQUEST

34. Please provide a Draft BRMIMP that identifies all potential impacts to sensitive biological resources resulting from the proposed project and include a complete description of all mitigation measures that the project owner would employ to avoid or minimize these impacts.

BACKGROUND

The applicant has indicated that worker environmental awareness training would be given to all construction personnel (p. 8.2-11, Volume I of the AFC). Staff needs to evaluate the specific training procedures that construction personnel would receive to determine if the worker environmental awareness training effort will be adequate to help avoid and minimize potential construction-related impacts to sensitive biological resources.

DATA REQUEST

35. Please provide a draft Workers Awareness Training Plan that specifically describes the training procedures that would be implemented by the project owner to avoid or minimize impacts to sensitive biological resources in the CVEC project area.

BACKGROUND

The applicant has indicated that “any wetlands crossed by the project linears would be avoided by trenchless technologies, or crossed in compliance with conditions specified by a Section 404 permit and Streambed Alteration Agreement, as appropriate” (p. 2, Draft Biological Assessment, Calpine, December 2001). The wetland areas identified include the California Aqueduct property, James Bypass, and Fresno Slough. The

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applicant has also indicated that “the project site and all the linear features are crossed, bordered or paralleled by irrigation ditches. These ditches both supply water to fields, and drain tail water back to detention basins or to the canals and sloughs that lead to the Mendota Wildlife area, and from there, the San Joaquin River. Irrigation ditches are of all sizes - from the 100-foot-wide California aqueduct to 3 –feet wide ditches cut by the farmer’s plow. The ditches are generally kept clear of aquatic and riparian vegetation, and rarely support fishes because all but larger ditches are seasonally dry.” Staff is unclear whether any of the aforementioned ditches, irrigation canals, and drainages (other than the California Aqueduct, James Bypass, and Fresno Slough) are considered jurisdictional areas (under Corps jurisdiction).

DATA REQUEST

36. Please discuss whether any aquatic features (e.g., irrigation ditches, canals, and drainages), other than the California Aqueduct, James Bypass, and Fresno Slough are considered to be under the Corps jurisdiction. If additional wetlands occur in the project area, please provide staff with the location (map at 1:500 scale or larger), wetland type, and acreage of each wetland area, and a discussion of how the applicant proposes to construct in the vicinity of these locations. If applicable, please provide the location(s), habitat type(s), and acreage(s) of any and all areas that will require a Corps permit and/or a Streambed Alteration Agreement from CDFG. Please provide documentation from the appropriate agencies (Corps and/or CDFG) that a permit will, or will not be required. Please provide a permit schedule, if applicable.

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Technical Area: Cultural Resources

Author: Judy McKeehan

BACKGROUND

The AFC Attachment 12-CR-1 identifies historical resources within one-half mile of the project site that may be more than 45 years old and forms DPR-523A and F are provided. It is not clear from the discussion in Finding on page 3 whether the industrial park cited as blocking the view of the power plant facilities is presently existing. It is not clear why historic buildings by the intersection of West Manning Avenue and Colorado Road and two farm complexes with large barns located northwest of the proposed facility on West Springfield Avenue will not be impacted. If these sites are within view of the proposed facilities, they must first be evaluated to determine whether the construction of the power plant would have a significant impact on the setting of eligible structures. Additional information is needed to complete the staff analysis.

DATA REQUEST

37. If it appears that any cultural resources within sight of the power plant may be affected, evaluate them (CEQA Section 15064.5, (a), (3), (A), (B), (C), and (D)) for eligibility for the California Register of Historical Resources (CRHR) using additional appropriate DPR 523 forms.
38. Please provide an evaluation of the effects the proposed project may have on the environmental setting of any of eligible structures.

BACKGROUND

The confidential Appendix 8.3F does not include a complete list of technical reports for the resources identified for the proposed gas line alignment in Appendix 8.3 C-2. Additional information is needed to complete the staff analysis.

DATA REQUEST

39. Please submit all cultural resources survey reports (technical reports) that provide the methods and results of all surveys conducted for this project. The methods section should indicate the width of each linear survey area.
40. If the survey coverage was less than 100 feet for historic features and less than 200 feet for archaeological features on each side of the centerline of the linear alignments, please provide a technical report documenting the additional surveys.

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BACKGROUND

It appears from statements in the AFC and Appendix 8.3E that portions of the power plant site and domestic and sanitary sewer lines for the Central Valley Energy Center Project have not been surveyed.

DATA REQUEST

41. Please submit the technical reports documenting these surveys.
42. If cultural resources are present, please provide completed DPR 523 forms for the resources.
43. If resource(s) exist and it appears that the resource(s) can be avoided, please indicate the measures that will be implemented to assure that the cultural resource(s) will not be impacted.
44. If it is not possible to avoid the cultural resource(s), please provide an evaluation of the eligibility of the site(s) for the California Register of Historical Resources (CEQA Section 15064.5, (a), (3), (A), (B), (C), and (D)).

BACKGROUND

It appears from Appendix 8.3C that the width of surveys changes at various points along the linear route. It cannot be determined whether all surveys were completed to an adequate width on each side of the linear alignment. Staff needs this information to complete the analysis.

DATA REQUEST

45. Please identify the exact location of surveys and indicate whether surveys were completed to a minimum of 200 feet on each side of the linear alignment
46. Provide the dimensions of the proposed area of direct or indirect impacts for the project site and linears.
47. Please determine whether any areas yet to be surveyed would be used as pipe or equipment staging and laydown areas or for parking or other purposes. If areas outside the pipeline easement are required, please provide the results of a cultural resources survey for these areas.
48. If cultural resources are present, please provide completed DPR 523 forms for the resources.

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49. If resource(s) exist and it appears that the resource(s) can be avoided, please indicate the measures that would be implemented to assure that the cultural resource(s) will not be impacted.
50. If it is not possible to avoid the cultural resource(s), please provide an evaluation of the eligibility of the(se) site(s) for the California Register of Historical Resources (CEQA Section 15064.5, (a), (3), (A), (B), (C), and (D)).

BACKGROUND

The discussion of cumulative impacts in the AFC does not provide any information on other projects in the area that could impact cultural resources. The discussion of cumulative impacts should consider such other projects. Additional information is needed to complete the staff analysis.

DATA REQUEST

51. Please provide a discussion of other projects (in permitting or currently under construction) within a one-mile radius of the Central Valley Energy Center project, and provide a discussion of the cumulative impacts relevant to those projects.

BACKGROUND

Attachment 12-CR-4 dated December 18, 2001, indicates that no responses from Native Americans had been received at that time

DATA REQUEST

52. Please provide copies of responses from Native Americans, if any, that have been received since that date.

BACKGROUND

In some cases, local historical and archaeological societies have knowledge of cultural resources in an area of a project that may not be available through normal record sources. Staff needs the following information to complete the analysis.

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DATA REQUEST

53. Please inquire with any local historical and archaeological societies that might have knowledge of historical or archaeological resources in the area of the project. Please provide copies of the inquiry letters and any responses.
54. If any such resources are identified that could be affected by the project or could have their immediate surroundings altered (change in the integrity of the setting) by this project in such a manner that the significance of the historical resource would be materially impaired, and they have not been recorded on a DPR 523 form, then please record the cultural resources on the DPR 523 form and provide a copy of the form.
55. If any of the resources could be affected by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, please provide a discussion of the significance of the resources under CEQA Section 15064.5(a), (3), (A)(B)(C) and (D) and provide staff with a copy of the assessment and the specialist's conclusions regarding the significance.

BACKGROUND

Cultural resources that are on lists created by local jurisdictions and could qualify as historical resources, and could be affected by the project, must be considered in the analysis. Staff needs the following information to complete the analysis.

DATA REQUEST

56. Please provide copies of local lists of important cultural or historic resources designated by a local ordinance by the city of San Joaquin or Fresno County.
57. If any of these resources could be affected by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, then please provide a copy of the requirements used by the local jurisdictions to qualify for the listing.
58. If any of the resources could be affected by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired and they have not been recorded on a DPR 523 form, then please record such cultural resources on DPR 523 forms and provide a copy of the forms.

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59. If any of the resources could be affected by the project or could have their immediate surroundings altered (change in the integrity of setting) by this project in such a manner that the significance of the historical resource would be materially impaired, please provide a discussion of the significance of the resources under CEQA Section 15064.5, (a), (3), (A)(B)(C) & (D) and provide staff with a copy of the assessment and the specialist's conclusions regarding significance.

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Technical Area: Geology

Author: Dr. Patrick Pilling, P.E., G.E.

BACKGROUND

Section 8.15.3.4.8 states that Mineral Resource Zones (MRZs) exist within 1 mile of the site; however, no map has been provided in the AFC depicting its location with respect to the site.

DATA REQUEST

60. Please provide a map at a scale of 1:24,000 depicting MRZs near the proposed plant site and associated linear facilities.

BACKGROUND

Section 8.15.3.4.9 states that the oil field closest to the site is located approximately 5 miles to the east of the site; however, the San Joaquin Quadrangle shows several oil wells immediately south of the site along Dinuba Avenue.

DATA REQUEST

61. Please include the oil well locations on the MRZs figure requested above and a discussion of any potential impacts the proposed project would have on these wells, if appropriate.

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Technical Area: Land Use

Author: Michael Berman

BACKGROUND

The project proposes linear facilities for natural gas supply that would be located mostly in roadway right-of-way through areas used for agricultural purposes (AFC Page 8.9-3 and 4). The AFC concludes that construction of these linear facilities would have less-than-significant impacts on agriculture but does not quantify the amount of agricultural land that would be disturbed by the construction of the pipeline (AFC Page 8.9-10). Recent site visits indicated that orchards and vineyards are located in close proximity to the linear facilities.

DATA REQUEST

62. Provide an estimate of the acreage of agricultural land by type of agriculture (e.g. orchards, vineyards, row crops, field crops, etc.) that would be disturbed during construction of the natural gas supply pipeline.

BACKGROUND

The project proposes linear facilities for reclaimed water supply that would be located mostly in roadway right-of-way through areas used for agricultural purposes (AFC Page 8.9-3 and 4). The AFC concludes that construction of these linear facilities would have less-than-significant impacts on agriculture but does not quantify the amount of agricultural land that would be disturbed by the construction of the pipeline (AFC Page 8.9-10). Recent site visits indicated that orchards and vineyards are located in close proximity to the linear facilities

DATA REQUEST

63. Provide an estimate of the acreage of agricultural land by type of agriculture (e.g. orchards, vineyards, row crops, field crops, etc.) and the amount of Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, and Farmlands of Local Importance that would be disturbed during construction of the reclaimed water supply pipeline. (Note that acreage of Prime Farmlands, et al., is requested here, but not in Data Request #1, because the gas pipeline goes through an area that is outside of the California Department of Conservation's farmland mapping area.)

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BACKGROUND

The project proposes an electrical transmission line through areas used for agricultural purposes (AFC Page 8.4-9). The AFC concludes that construction of these linear facilities would have less-than-significant impacts on agriculture but does not quantify the amount of agricultural land that would be disturbed by the construction of the transmission line.

DATA REQUEST

64. Provide an estimate of the acreage of agricultural land by type of agriculture (e.g. orchards, vineyards, row crops, field crops, etc.) and the amount of Prime Farmlands, Farmlands of Statewide Importance, Unique Farmlands, and Farmlands of Local Importance that would be disturbed during construction of the electrical transmission line.

BACKGROUND

The AFC concludes that the construction of the reclaimed water pipeline, natural gas pipeline, and electrical transmission lines would not have significant impact on agricultural resources. The AFC does not indicate where in relation to the centerline of the roadway right-of-way the water and gas pipelines would be located. Our field visit revealed that there are irrigation ditches, pumps and pipelines along the roadway rights-of-way that may be disturbed by the construction of the water and gas pipelines; it is unknown whether such facilities would be removed during the construction of the electrical transmission lines.

DATA REQUEST

65. Provide an estimate of amount of irrigation ditches, pumps, pipelines and other irrigation facilities that would be removed during construction of the project natural gas pipeline, reclaimed water supply line, and the electrical transmission line, indicating the general location of the facilities to be removed.

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Technical Area: Socioeconomics

Author: Daniel Gorfain

BACKGROUND

The AFC cites the County of Fresno General Plan among the LORS in Table 8.8-1, but not the City of San Joaquin General Plan.

DATA REQUEST

66. Please provide a copy of the City of San Joaquin General Plan including any amendments, as well as its Economic Development, and Public Facilities and Services Elements.

BACKGROUND

Table 8.8-9 presents Fresno County Revenue and breaks down taxes into “Current Property” and “Other.” The Table also shows “Projected FY 2001 Expenditures and Revenues.

DATA REQUEST

67. Please provide a breakdown of Sales and Hotel/Motel (or Transient) tax revenues for the years shown in this Table.
68. Please update the FY 2001 column to show actual numbers, if available, and add budgeted FY 2002 amounts and FY 2003 projections, if available.

BACKGROUND

Table 8.8-10 presents Expenditures and Revenues for the City of San Joaquin. It breaks tax revenues down to “Property” and “Other.” It also projects Expenditures and Revenues for 2001-02. As we understand it, there are no hotels or motels within the City’s boundaries.

DATA REQUEST

69. Please provide a breakdown of sales tax revenue for the city.
70. Please update the 2001-02 column to show budgeted amounts and add a “Projected 2002-03” column, if available.

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BACKGROUND

Section 8.8.3.5, including Table 8.8.11, present enrollment information for the Golden Plains Unified School District only.

DATA REQUEST

71. Please provide present enrollment information for the City of Fresno and City of San Joaquin Schools and discuss current and projected school capacity and their ability to accommodate temporary enrollment during the construction period.

BACKGROUND

The first paragraph in Section 8.8.4.3.1 “Construction Workforce” states: “Construction personnel requirements will peak at approximately 605 workers in month 17. However, the peak construction workforce for the plant is estimated at 385 workers in month 15.”

DATA REQUEST

72. Table 8.8-12 shows a workforce of 382 in month 17. If water pipeline workforce is added, the total is 495. Please explain these discrepancies and confirm the correct information regarding construction workforce.

BACKGROUND

The second paragraph in Section 8.8.4.3.1 states that based on surveys of the Building Trades Council and CEDD, “...workforce in Fresno County will be adequate to fulfill the CVEC labor requirements for construction.” However, Section 8.8.4.3.2 states: “It is anticipated that most of the construction workforce will be drawn from Fresno County as well as Madera, Tulare, and Kings Counties, if necessary.”

DATA REQUEST

73. Please explain the availability of labor, particularly skilled labor in Fresno County and the conditions under which labor from neighboring counties will be recruited.

BACKGROUND

The labor categories in Tables 8.8-12 & 14 do not correspond.

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DATA REQUEST

74. Please provide “Available Labor by Skill in Fresno County” if available from local sources, such as the Building and Trades Council.

BACKGROUND

Section 8.8.4.3.3 cites the number of hotel/motel rooms in the City of Fresno, but does not provide information on hotel/motel vacancy rates in Fresno, the number of hotel/motel rooms and vacancy rates in other nearby communities, nor on the availability of houses, apartments or other temporary housing for rent, which some workers may choose in light of the 26 month construction period.

DATA REQUEST

75. Please provide the annual hotel/motel vacancy rate, as well as the housing vacancy rate in the City of Fresno, the City of San Joaquin and other neighboring communities. In addition, please identify the number and vacancy rate of RV spaces in the City of Fresno, the City of San Joaquin, and neighboring communities.

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Technical Area: Soils and Water Resources

Author: Charlie Moore, John Kessler and Joe Crea

BACKGROUND

Construction and operation of the Central Valley Energy Center (CVEC) may induce water and wind erosion at the power plant site, proposed as approximately 25 acres of development of an overall 85-acre site. The Applicant proposes to excavate from the 85-acre parcel in order to fill and raise the elevation of 25 acres by about 2 feet above existing grade. An Erosion Control Plan is needed addressing construction activities at the power plant facility, and any associated linear or other facilities, such as transmission lines, pipelines, lay-down areas, and staging/storage areas.

Storm water runoff may also contribute to erosion and sedimentation. A Storm Water Pollution Prevention Plan (SWPPP) will be necessary, which addresses how drainage into the retention pond will be monitored for contaminants before allowing water to percolate into the ground. Currently, storm water drains into man-made ditches and canals. According to Section 8.14.5.4 of the AFC, the site's storm water will drain into a retention pond, for percolation into the ground. The plans for the storm water management system as described in the AFC could be considered inconsistent because in Section 8.14.8 of the AFC, it states that an on-site detention pond will be designed to maintain the discharge of storm water below the pre-construction flow rates. Use of a detention pond suggests temporary storage and off-site discharge.

As requested in the November 14, 2001 letter from the RWQCB to the CEC, the SWPPP should also address runoff from the remaining 60 acres of land that includes the cooling tower and landscaped areas. These areas are also susceptible to materials associated with industrial activity that include mist, ash, or other particulate matter which could be potentially discharged with storm water runoff (AFC Sections 8.9.4.2 and 8.14.5.4, Figure 8.14-4 – Proposed Drainage Facilities).

DATA REQUEST

76. Please provide a draft Erosion and Sediment Control Plan and SWPPP for Construction Activity that identifies all measures that will be implemented at various locations of the project during construction of the proposed CVEC Project. The draft Erosion Control Plan shall identify all permanent and temporary measures in written form and depict conceptual locations for specific Best Management Practices (BMP's) on construction drawing(s) of appropriate scale. The purpose of the plan is to minimize the area disturbed, to protect disturbed and sensitive areas, to retain sediment on-site and to minimize off-site effects of stormwater runoff. The elements of the plan shall include specific best management measures to be employed to control storm water runoff during construction at identified locations. In addition, any measures necessary to

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address Nationwide Permits, as required, should be identified. The plan should also identify maintenance and monitoring efforts for all erosion control measures.

77. Please provide a Site Grading Plan and representative profiles and cross sections of areas that will be cut and filled, in relation to the proposed conceptual location of BMP's for erosion control during construction.
78. Please clarify if the proposed storm water system for operations would consist of a retention pond with no off-site discharge, or a detention pond with off-site discharge. If off-site discharge is proposed, please provide the calculated project discharges with the effect of the detention pond, demonstrating that project discharges will be less than undeveloped discharges, for recurrence intervals of 5, 10, 25 and 100-year events.
79. Please provide an updated Site Drainage Plan for project operations, distinguishing existing from proposed ditches and facilities, and addressing the storm water runoff collection, conveyance and retention for the remaining 60-acres of land as applicable per the RWQCB's comments. In addition, please clearly distinguish storm water collection facilities and BMP's applicable to process areas from non-process areas. If it is difficult to distinguish the separation of process from non-process areas in the revised Drainage Plan, then please supplement with a schematic diagram.
80. If the proposed storm water system for operations would consist of a retention pond with no off-site discharges, please provide the calculations or a summary of the design criteria and analysis determining the adequacy in capacity of the proposed 45.4 acre-foot storm water retention pond. Please specify the storm event the pond is sized to retain (e.g. 25-year recurrence, 24-hour event), and please describe how greater events will be managed without discharge from the site, such as by providing a Pond Balance for the range of events including a 100-year recurrence event.
81. Please provide a draft SWPPP for Industrial Activity that identifies all measures that will be implemented at various locations of the project during operation of the proposed CVEC Project. The draft SWPPP shall identify all permanent BMP's in written form and depict conceptual locations for specific BMP's on the site drainage plan. The draft SWPPP for Industrial Activity should also address the RWQCB's comments as applicable.

BACKGROUND

In reference to AFC Sections 8.9.3 and 8.9.4, the proposed project would occupy 25 acres of the 85-acre site being acquired by the Applicant. A portion of the 60-acre site would be used for construction laydown and staging. Following construction,

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approximately 60 acres would be returned to its previous use. All 85 acres are designated as Prime Farmland.

DATA REQUEST

82. Please confirm that following construction, the approximately 60 acres of undeveloped land would be returned to agricultural use, such as for growing cotton as it is used presently, and that none of the 60 acres would be used for appurtenant facilities. If this is not the case, please quantify the acreage needed by such additional facilities, and list the purpose of such facilities.

BACKGROUND

Page 2-9, Section 2.2.7.4.1 of the AFC describes Water for the Circulating Water System. This section states: "These tanks will provide approximately 17 hours of operational storage for a maximum flow of 2,638 gallons per minute (gpm) in the event that there is a disruption in flow of reclaimed water." The maximum flow of 2,638 gpm is less than the average flow of 3,321 gpm and the peak flow of 6,455 gpm stated in Table 2.2-1 on page 2-8. No backup water supply is proposed other than storage provided by the proposed two, 1.5 million gallon (mg) capacity on-site tanks. The December 7, 2001 letter from the RWQCB to the Fresno-Clovis Wastewater Treatment Facility (WWTF) specifies that supply of reclaimed water to CVEC must be interrupted if water quality parameters consistent with Title 22 are not met. These include exceeding the turbidity limits of 10.0 NTU and not maintaining the minimum chlorine residual of 0.2 mg/l.

DATA REQUEST

83. Please evaluate the operational storage for the average flow of 3,321 gpm and the peak flow of 6,455 gpm.
84. Based on operational history of the WWTF, please address the adequacy in capacity of on-site recycled water storage with respect to potential for either a disruption in flow caused by either an interruption in supply or a deviation from water quality specifications. If the disruption in recycled water supply exceeds the capacity of on-site storage for either average or peak flow demands, at what point does the CVEC commence emergency shutdown of the facility? Discuss the time needed for the emergency shutdown and verify that at the end of the emergency shutdown, there will be ample storage remaining (240,000 gallons) to meet the emergency fire flows.

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BACKGROUND

Page 2-14, Section 2.2.1 of the AFC discusses Fire Protection. This section states that the backup fire pump would be a diesel driven pump. We believe that increased reliability could be provided with an auxiliary (standby) power supply and an automatic transfer switch.

DATA REQUEST

85. Please evaluate the design of the backup fire pump system using a standby power generator and automatic transfer switch. The generator could be fueled with natural gas, which would be on-site.

BACKGROUND

In reference to AFC Figure 2.2-6a - Annual Average Water Balance Diagram and Figure 2.2-6b - Typical Summer High Water Balance Diagram, the source of potable water is shown as well water and not from the City of San Joaquin as reflected in the text. In both figures, the units appear to be in gpm, but they do not correspond to the average (3,321 gpm) and peak (6,455 gpm) flow rates shown in Table 2.2-1. The Applicants Data Adequacy Supplement dated December 2001; paragraph 12-WR-9 indicates that the flow data in Table 2.2-1 is accurate.

DATA REQUEST

86. Please revise Figures 2.2-6a and 2.2-6b to reflect the City of San Joaquin as the potable water supplier, and to reflect the average and peak flows shown in Table 2.2-1.
87. Please modify Figures 2.2-6a and 2.2-6b to indicate that the reclaimed water passes through the storage tanks prior to being used on-site.

BACKGROUND

In reference to the October 12, 2001 Engineers Report for the Production, Distribution and use of Reclaimed Groundwater for the CVEC, Section 2.7 addresses Reclaimed Water System Improvements and discusses the size and number of sodium hypochlorite tanks to be installed downstream of the reclamation wells. However, the report does not discuss the size and number of sodium hypochlorite tanks at the two, 1.5 mg tanks on-site at CVEC.

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DATA REQUEST

88. Please discuss the size and number of sodium hypochlorite storage tanks proposed that would be on-site at the CVEC to feed hypochlorite upstream of the two, 1.5 mg water storage tanks.
89. At average and peak water demands, please discuss the number of days of storage of hypochlorite that will be provided by the hypochlorite tanks at the CVEC site.
90. Discuss how the chlorine feed equipment at the two, 1.5 mg tanks will be kept operational. Will the equipment at the CVEC continuously feed at a low rate then ramp up in the event the chlorine feed equipment at the reclamation wells fails; or will the feed equipment be on standby?

BACKGROUND

In reference to AFC Section 7.1.2 and the Reclaimed Water Quality and Engineers Report for the Production, Distribution and use of Reclaimed Groundwater for the CVEC - Section 2.7, these sections discuss the application of sodium hypochlorite downstream of the reclamation wells, flash mixing and a continuous chlorine residual analyzer. In addition, there is to be a primary continuous chlorine residual analyzer at the inlet of the two 1.5 mg on-site storage tanks. The primary analyzer will signal the reclamation analyzer via telemetry to adjust the hypochlorite feed rate. The 20.5 miles of 27-inch pipe will contain 3.22 million gallons (mg) and with average day water demands, the detention time will be 16.2 hours. There appears to be adequate detention time in either the transmission pipe or the tanks to provide the needed disinfection. In addition, if water that was inadequately treated was to go undetected but still used within the CVEC, it could result in an adverse impact by not meeting Title 22 standards with respect to both water quality and public health.

DATA REQUEST

91. Please evaluate the need for establishing chlorine treatment system redundancy. An example for establishing redundancy would be to have the reclamation well chlorine analyzer signal the primary analyzer upstream of the two 1.5 mg tanks in the event of chlorine feed failure at the reclamation wells, so that the primary analyzer chlorine feed equipment could ramp-up to provide the needed dose.

BACKGROUND

In reference to the Engineers Report for the Production, Distribution and use of Reclaimed Groundwater for the CVEC, Section 2.9 - Plant Reliability Features

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discusses the possibility of utilizing “waste valves” at the reclamation wells to divert water to the infiltration ponds in the event a turbidity spike exceeds 10 NTU.

DATA REQUEST

92. If it is determined that the “waste valves” will not be installed, discuss the alternative method that will be used to prevent the use of reclaimed water that might exceed the turbidity limit of 10 NTU.

BACKGROUND

In reference to AFC Section 2.2.7.4.1 - Water for the Circulating Water System, water-conditioning chemicals are proposed to minimize corrosion, control the formation of mineral scale, and prevent biofouling. The chemicals include:

- Sulfuric acid for alkalinity reduction to control scaling tendency of the circulating water.
- Polyacrylate solution as a sequestering agent to inhibit scale formation in the circulating water blowdown flow.
- Sodium hypochlorite (or bromine or sodium bromide as alternatives) to prevent biofouling in the circulating water system.

DATA REQUEST

93. Please describe the capacity (in days of average and peak plant operation) of each chemical container.
94. For each chemical container, please describe whether it would be located inside, in a covered area, or outside, and specify the volume of secondary containment proposed as may be appropriate either individually, by container, or for a group of containers within a storage area.
95. Demonstrate how chemical storage areas are to be drained to prevent discharge to either the storm water or the wastewater system.
96. In general, water and wastewater system chemicals are to be added in proportion to flow. Are chemical dosage control systems proposed that will sample and maintain chemical concentrations within high and low tolerances (set points)? Will alarms cause systems or plant operations to shut down in the event chemical concentrations are out of allowable ranges?

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BACKGROUND

In reference to AFC Section 2.2.9.1.2 - Zero Liquid Discharge (ZLD) Treatment System, and Figures 2.2-6a and 2.2-6b, the Multimedia Filter, High TDS Reverse Osmosis, Brine Concentrator and the Drum Dryer are critical processes proposed to achieve ZLD. Absent redundancy in the capacity of these wastewater treatment units, a failure in any of these units could result in either plant electrical production being curtailed or an unauthorized discharge of the wastewater or waste streams. Therefore, staff needs additional information to accurately assess the potential for an accidental spill and resultant adverse environmental impact.

DATA REQUEST

97. Will the Multimedia Filter, High TDS Reverse Osmosis, Brine Concentrator and the Drum Dryer be installed in tandem for redundancy in the event of failure?
98. If the equipment will not be installed with redundancy, what will be the procedure in the event of equipment failure?
99. Emergency storage ponds are not discussed in the AFC. Will emergency storage ponds be needed in the event of ZLD equipment failure?
100. If emergency storage ponds will be needed, please evaluate their size and location.

BACKGROUND

In reference to Figure 2.2-6a and Figure 2.2-6b, both of the reverse osmosis treatment systems produce reject water.

DATA REQUEST

101. Please clarify why the reject from the High TDS Reverse Osmosis system is directed to the Brine Concentrator while the reject from the Makeup Reverse Osmosis system is directed to the Cooling Tower.

BACKGROUND

The last sentence of the first paragraph under 2.2.8 - Plant Cooling Systems states that "Approximately 212,163 gpm of circulating cooling water is required to condense the steam at maximum plant load," which appears inconsistent with the Water Balance depicted on Figure 2.2-6b.

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DATA REQUEST

102. Please clarify the inconsistency of this statement in comparison to the water balance shown in Figure 2.2-6b.

BACKGROUND

Section 7.1.2 of the AFC discusses the siting of the sodium hypochlorite facility. This section states that in order to meet required setbacks, it is proposed that the southerly levee of Pond 68 be removed and relocated approximately 45 feet to the north.

DATA REQUEST

103. Please describe the nature of Pond 68, as to its type of facility, and as to what regulatory permit requirements might apply to the proposed relocation of the levee.

BACKGROUND

In reference to AFC Section 8.14.3, and Data Adequacy Response 6-WR-3, the proposed discharge of sanitary wastewater from the CVEC to City of San Joaquin's secondary wastewater treatment facility (WWTF) is currently prohibited under its current Waste Discharge Requirements as issued by the RWQCB. Although the Applicant has identified alternative means to dispose of wastewater such as septic systems, etc., it is understood that the preferred point of discharge would be to the WWTF. Based on the November 14, 2001 letter from the RWQCB to the CEC commenting on the proposed CVEC project, the status of WWTF upgrade from a regulatory standpoint is characterized as pending submittal of a Report of Waste Discharge to the RWQCB and compliance with CEQA.

DATA REQUEST

104. Please provide a schedule of the expected time required to coordinate regulatory approvals, comply with CEQA and achieve the physical upgrade in discharge capacity to the City of San Joaquin's WWTF.

BACKGROUND

Table 8.14-1 (Water Resource LORS) and Table 8.14-7 (Water Resource Permits) lists that both an Army Corps of Engineer's Section 404 Permit and a CA Department of Fish

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and Game Streambed Alteration Permit may be necessary with respect to pipeline crossings at canals and waterways.

DATA REQUEST

105. Please provide a list of these crossings where permits may be necessary and describe the proposed facilities and potential disturbance that may occur within the ordinary high water mark of the channels or within associated wetlands.
106. Please provide written evidence of consultation with these agencies and the prescribed permit processes as applicable.

BACKGROUND

In reference to AFC Table 8.14-1 – Water Resource LORS, and Table 8.14-7 – Water Resource Permits, it lists that both an Army Corps of Engineer's Section 404 Permit and a CA Department of Fish and Game Streambed Alteration Permit may be necessary with respect to pipeline crossings at canals and waterways.

DATA REQUEST

107. Please provide a list of these crossings where permits may be necessary, and describe the proposed facilities and potential disturbance that may occur within the ordinary high water mark of the channels, or within associated wetlands.
108. Please provide evidence of consultation with these agencies and the prescribed permit processes as applicable.

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Technical Area: Traffic and Transportation

Author: David Young

BACKGROUND

The AFC discusses the construction of the water and gas pipeline linear facilities in sections 8.10.4.2.2 and 8.10.4.2.3. However, the construction schedules, workforce transportation, travel routes and parking arrangements associated with these linears were not provided.

DATA REQUEST

- 109. Please provide the construction schedule associated with the water and gas pipelines.
- 110. Please provide a monthly breakdown of the construction manpower schedule for each linear facility.
- 111. Please provide a monthly schedule indicating the amounts of truck deliveries associated with each linear.
- 112. Please discuss how the linear construction would affect traffic volumes and LOS on area roadways.

BACKGROUND

The construction of the linear facilities would require working within roadway rights-of-way.

DATA REQUEST

- 113. Please identify the effects the construction of the linear facilities would have on local residents, businesses and on street parking.
- 114. Discuss the measures that would be used to minimize the effects.
- 115. Please discuss what measures would be used to ensure safe roadway conditions during the construction of linear facilities such as lane marking, construction notices, roadway signage, detours, flagperson, etc.

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BACKGROUND

The AFC states that shipments of hazardous materials would be required for the construction and operation of the power plant.

DATA REQUEST

116. Please identify any traffic safety danger points, i.e., sharp curves or sensitive receptors such as schools, residences or hospitals, along these routes.

BACKGROUND

The AFC discusses hazardous material deliveries during the construction and operational phases of the project but does not include any discussion on hazardous waste disposal.

DATA REQUEST

117. Please discuss the following items related to hazardous material disposal during the operational phase of the project:
- a) Location of disposal facilities
 - b) Proposed truck routes
 - c) Truck trip frequency

BACKGROUND

The AFC states that the project's construction traffic would cross the Union Pacific Railroad (UPRR) at two locations.

DATA REQUEST

118. Please indicate the monthly amount of rail traffic associated with the Union Pacific line.

BACKGROUND

Table 8.10-3 displays the existing traffic characteristics of all roadways affected by the CVEC project. However, the table does not include any data for the roadways potentially affected by the construction of linear facilities.

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DATA REQUEST

119. Please provide existing and projected characteristics for all roadways potentially affected by the construction of the CVEC linear facilities.

BACKGROUND

Table 8.10-3 of the AFC displays existing traffic characteristics including Hourly Design Capacity (HDC). However, data was not available (NA) for some roadway segments.

DATA REQUEST

120. Please describe how Levels of Service were determined without a known HDC.

BACKGROUND

Section 8.10.5 of the AFC states that there are no other known, proposed projects whose construction workforce and/or material deliveries would concurrently travel the same state routes and local roadways.

DATA REQUEST

121. Please provide the source of this assumption, i.e., the City of San Joaquin's Community Development or Planning Department; or Fresno County Planning or Public Works Department, or other applicable source.

BACKGROUND

The AFC discusses air traffic in section 8.10.3.8 and indicates that there is the possibility of private landing strips in the general area of the project site.

DATA REQUEST

122. Please supply the location (i.e., addresses, or location near mapped roads) for any air related facilities or landing strips in the area that could potentially be affected by the CVEC.

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BACKGROUND

The AFC states that all of the highways potentially affected by the CVEC are operating at or above a LOS B. However, Table 8.10-3 shows some existing roadway segments operating at a LOS C.

DATA REQUEST

123. Please clarify if Table 8.10-3 represents the correct existing traffic characteristics for the listed roadways and correct the table accordingly.

BACKGROUND

Table 8.10-3 displays estimated Average Daily Volumes for streets and highways for the CVEC. An asterisk is used but does not provide the source for these estimates.

DATA REQUEST

124. Please provide the source of the estimates for these two roadways.

BACKGROUND

The Combined Daily Traffic and Combined p.m. Peak Traffic volumes in Table 8.10-7 do not correctly reflect the additional 938 daily trips generated by the project construction workforce.

DATA REQUEST

125. Please describe why the Combined Daily Traffic counts in Table 8.10-7 do not correlate with the Average Daily Volumes for the same roadways in Table 8.10-3.
126. Please make the appropriate changes to Tables 8.10-3 and 8.10-7 to accurately reflect the addition of the daily construction trips.

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Technical Area: Transmission System Engineering

Author: Mark Hesters

BACKGROUND

According to the System Impact Study for the Central Valley Energy Center (CVEC) the operation of the proposed project could cause transmission line overloads under normal operating conditions. The California Independent System Operator (Cal-ISO) will not allow the overloads to occur and would instead use congestion management protocols to mitigate overloads. Staff is concerned that the Cal-ISO will use decremental bids to mitigate line congestion caused by the CVEC and this will create a situation where the CVEC creates congestion and then gets paid to mitigate it at ratepayer cost.

DATA REQUEST

127. Please describe how congestion management would be used to mitigate line overloads. Would the project essentially create congestion and then get paid to prevent congestion? Describe how congestion caused by the CVEC would be handled by the Cal-ISO under current rules and who would pay for the mitigation

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Technical Area: Visual Resources

Authors: Ken Peterson

Plume: William Walters and Lisa Blewitt

BACKGROUND

In addition to the Key Observation Points (KOPs) identified in the AFC, the project site can be seen at least partially from several significant observation points, including:

- View from the school ballpark stands
- View from the Community Center park bandstand
- View from the residences near the Northwest corner of Colusa Ave. and Karen Ave.
- View from the residences on the Southeast side of 12th Street between Colorado and Arizona Avenues
- View from the residences on Sutter Avenue south of Manning Avenue

It appears that the public and residents' views from the above locations could be significantly affected by the proposed Central Valley Energy Center, and that further analysis and mitigation may be required to address these potential impacts.

DATA REQUEST

128. Please evaluate the proposed project's potential impact to visual resources at the above observation points. The exact number of residences potentially affected should be ascertained. Potential evaluation methodology could include use of wire frames to simulate the project's profile on the horizon, taking pictures of balloons tethered from the project site at the proposed height of the project's stacks, or use of photosimulations. If the evaluation shows potential for the project to cause a significant impact at the above viewpoints, please propose mitigation for eliminating the impact or reducing it to a less than significant level. Potential mitigation measures could include:
- a. A revised on-site landscaping plan that would adequately screen the project from these views, including a map to scale; and/or,
 - b. Adding permanent trees and shrubs on park, school, and private property that would partially mitigate the visual impacts of the project from these locations. The desirability of new trees or shrubs should be discussed with the residents, and school and City officials. For example, some residents may prefer the use of 8' shrubs rather than trees, or specific tree types that are more open in the lower portions of their trunks.

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BACKGROUND

Four key observation points (KOPs) were established in order to evaluate both the visual setting and the potential for project-induced visual impacts. Photographs were obtained at each KOP and presented along with visual simulations of the proposed project. Based on a field reconnaissance, all of the images (existing view photographs as well as simulations) are presented at less than life-size scale. The presentation of images at such a reduced scale does not accurately represent the views that would be experienced at the various KOPs because the images substantially understate the prominence of visible landscape features as well as potential visual impacts.

DATA REQUEST

129. Please re-scale all existing view and simulation images to achieve life-size scale. If re-scaling results in substantial degradation of the image, please provide new setting and simulation images at life-size scale. After obtaining appropriately scaled images, please provide four copies of high quality 11"x17" color photocopies of the existing views and simulations, and any images or simulations produced in response to Data Request No.128.

BACKGROUND

The site plan referred to in the Data Adequacy Responses (12-VR-5) has not been submitted.

DATA REQUEST

130. Please submit the site plan referred to in the Data Adequacy Responses (12-VR-5).

BACKGROUND

The AFC's discussion of mitigation (p. 8.11-25) includes three tentative mitigation measures.

DATA REQUEST

131. Please submit all final mitigation measures that the applicant is proposing.

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BACKGROUND

The AFC did not discuss project element paint finish specifications and textures.

DATA REQUEST

132. Please submit a detailed color, paint specification, and texture plan for major project elements, including transmission lines and towers.

BACKGROUND

For many years after start of project operation the landscaping would not be sufficiently developed to provide significant blockage of the project except for the palm trees, which would be 25' tall when planted.

DATA REQUEST

133. Please consider the augmentation of the landscaping plan to include the use of trees other than palm trees that would provide more complete screening. Also please consider the wider use of trees that can maximize screening of the power plant within the first five years of operation in the area to the left and right of the presently-planned palm trees shown in KOP 1.

BACKGROUND

It is Commission staff's understanding that the applicant is considering utilizing an off-site parcel for temporary construction, employee living, and service facilities.

DATA REQUEST

134. Please submit the final plan for temporary construction, employee living and service facilities, a discussion of visual impacts caused by these facilities, and possible mitigation.

BACKGROUND

The application states that temporary cyclone fencing will be designed and installed around the laydown area to reduce the visibility of construction period activities.

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DATA REQUEST

135. Please describe the design details planned for the cyclone fencing to be used for reducing the visibility of construction period activities.

BACKGROUND

The AFC (Section 8.11.4.4.5, p. 8.11-22) indicates that industrial facilities located on the north side of the City of San Joaquin and in neighboring communities are already the source of visible plumes. Also, agricultural burning in the area produces large clouds of smoke. In order to assess the project's visible water vapor plume impacts, staff requires more information regarding the existing plume setting.

DATA REQUEST

136. Please provide a list of the visible water vapor plume sources located near the project site. Also, please provide a map showing the location of each visible water vapor plume source provided in the list.
137. For all currently existing visible water vapor plume sources, please identify how often they operate and specify whether any are both frequent and visually dominant in general. For existing cooling towers, please identify their heat rejection load in megawatts.

BACKGROUND

Staff plans to perform a plume modeling analysis for the cooling tower using both the Seasonal/Annual Cooling Tower Impact (SACTI) Model and the Combustion Stack Visible Plume (CSVP) Model. Staff will require additional project data to complete this analysis. Please note that staff intends to model the cooling tower using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file used to perform the modeling. The cooling tower exhaust will be assumed to be saturated at the exhaust temperature provided through interpolation. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will be used to more precisely represent the cooling tower exhaust conditions.

DATA REQUEST

138. Please summarize for the cooling tower the design parameters that affect vapor plume formation, including exhaust temperature, exhaust mass flow rate, and moisture fraction by weight. These values should account for a range of ambient

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conditions that show a reasonable worst-case operating scenario. For example, ambient conditions from the turbine emissions and operating parameters of AFC Appendix 8.1 are provided in the table below; however a similar, alternative range of design parameters may be provided in the response. Update any information provided within the table, if necessary.

Parameter	Cooling Tower Exhausts					
Number of Cells	16 cells (in 1x16 array)					
Cell Height	18 meters					
Cell Diameter	10.7 meters					
Ambient Temperature	32°F		61°F		100°F	
Ambient Relative Humidity (%)						
Duct Burner Status	On	Off	On	Off	On	Off
Power Augmentation Status	On	Off	On	Off	On	Off
Heat Rejection (MW/hr)						
Liquid/Gas Mass Flow Ratio						
Design Inlet Air Flow Rate (kg/s)						
Exhaust Temperature (°F)						
Exhaust Flow Rate (lb./hr)						
Molecular Weight (estimated)	28.8 g/g-mol					
Moisture Content (% by weight) (if cells are plume-abated)						

139. Please indicate if the cooling tower has any plume mitigation features that would reduce the 100 percent moisture content that will be assumed for conventional cooling tower exhaust.

BACKGROUND

The visible water vapor plume discussion provided in the Visual Resources section of the AFC (Section 8.11.4.4.5, pp. 8.11-21 to -22) does not provide information regarding the frequency, duration and size characteristics of the heat recovery steam generator (HRSG) water vapor plumes. Staff will conduct a HRSG plume modeling analysis using the CSVP model to determine plume frequency and plume dimensions. Staff will require additional project data to complete this analysis. Please note that staff intends to model the HRSG using hourly estimated exhaust conditions based on the hourly ambient conditions of the meteorological file used to perform the modeling. Therefore, additional combinations of temperature and relative humidity, if provided by the applicant, will be used to more precisely represent the HRSG exhaust conditions.

**Central Valley Energy Center
(01-AFC-22)
Data Requests**

DATA REQUEST

140. For staff to conduct CSVP modeling of the HRSG exhaust plumes, please provide HRSG exhaust parameter data to fill the following table. The values must correspond to full load operating conditions at the specified ambient conditions.

Ambient Conditions	Relative Humidity (%)	Moisture Content (% by Weight)	Exhaust Flow Rate (lb./hr)	Exhaust Temperature (°F)
Full load with Duct Firing and Power Augmentation				
32°F				
61°F				
100°F				
Full load with Power Augmentation no Duct Firing				
32°F				
61°F				
100°F				
Full Load no Duct Firing and no Power Augmentation				
32°F				
61°F				
100°F				

141. Please provide a short discussion regarding the operating assumptions and basis for the HRSG exhaust parameter data that is provided, including power augmentation (i.e. inlet air foggers and steam injection) and duct burner operating status. Also, please indicate any relationship between the use of duct burners and/or power augmentation with ambient conditions (i.e., note temperature/relative humidity conditions when either or both are not expected to be operated).

BACKGROUND

Staff may also model the plume frequency and dimensions of the auxiliary boiler. In order for staff to complete the plume assessment of the auxiliary boiler, additional operating data is needed.

DATA REQUEST

142. Please provide, at a minimum, auxiliary boiler exhaust parameter data to fill the following table. The values must correspond to full load operating conditions at the specified ambient conditions.

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Ambient Conditions	Relative Humidity (%)	Moisture Content (% by Weight)	Exhaust Flow Rate (lb./hr)	Exhaust Temperature (°F)
32°F				
61°F				
100°F				

**Central Valley Energy Center
(01-AFC-22)
Data Requests**

Technical Area: Waste Management

Author: Alvin Greenberg, Ph.D.

BACKGROUND

The State of California requires a minimum of 50 percent of all solid waste generated to be recycled. The AFC does not provide adequate information on the amounts of recycling the applicant intends to do for either construction or operation waste. This information is necessary in order to determine the impacts on the environment and the waste disposal facilities.

DATA REQUEST

- 143. Please provide a draft Waste Management Plan indicating how the applicant plans to comply with waste diversion requirements of state and local ordinance.
- 144. Please also indicate the percentage of hazardous and non-hazardous wastes that would be diverted from landfill disposal.

BACKGROUND

The Phase I Environmental Site Assessment prepared by ERM noted that “pesticide and fertilizers are and have historically been applied to the crops and land at the subject property” and thus “the subject property may contain elevated concentrations of pesticides.” In order to properly protect site workers and the public, staff needs to know if the soils on site do indeed contain elevated concentrations of pesticides.

DATA REQUEST

- 145. Please provide a Phase II ESA consisting of appropriate soil and groundwater sampling and analysis for pesticides.